

# Factors Associated With Increased Reading Frequency in Children Exposed to Reach Out and Read

Sharon Rikin, MD; Kevin Glatt, BA; Pippa Simpson, PhD; Yumei Cao, PhD; Ogugua Anene-Maidoh, MD, PhD; Earnestine Willis, MD, MPH

From the Medical College of Wisconsin, Milwaukee, Wisc

The authors declare that they have no conflict of interest.

Address correspondence to Earnestine Willis, MD, MPH, Department of Pediatrics, Center for the Advancement of Underserved Children, Medical College of Wisconsin, 8701 Watertown Plank Rd, Milwaukee, WI 53226 (e-mail: ewillis@mcw.edu).

Received for publication March 3, 2015; accepted August 22, 2015.

## ABSTRACT

**OBJECTIVE:** A 2014 American Academy of Pediatrics Policy Statement on Literacy Promotion recommends providers endorse daily caregiver–child reading during health supervision visits. Reach Out and Read (ROR) is a widely used model of office-based early literacy promotion. We hypothesized that exposure to ROR and other variables such as reading as part of a bedtime routine positively correlate with caregiver–child reading frequency.

**METHODS:** This is a cross-sectional study based on a convenience sample of caregivers at 8 ROR-Milwaukee sites, which serve predominantly low-income populations in Milwaukee. On the basis of results of previously validated questionnaires, odds ratios were calculated to determine which variables are significantly associated with caregivers' reading to children 0 to 2 (rarely), 3 to 6 (often), and 7 (daily) days per week. Random forest analysis was performed to examine relative importance of variables in predicting caregivers' reading frequency.

**RESULTS:** A total of 256 caregivers were eligible for analysis; those who reported receiving  $\geq 4$  books from pediatricians read to children more days per week compared to those receiving fewer books (5.07 vs 3.61,  $P < .001$ ) and were more likely to read daily (odds ratio 3.07, 95% confidence interval 1.80–5.23). Caregivers' interest in reading, number of children's books in the home, reading as part of a bedtime routine, and number of books received from pediatricians were among the most important variables in distinguishing rarely, often, and daily reading caregivers.

**CONCLUSIONS:** Exposure to ROR-Milwaukee's intervention is associated with increased reading frequency. Identified variables such as reading as a bedtime routine and number of children's books in the home should be targets for future literacy-promoting interventions.

**KEYWORDS:** literacy; pediatrics; primary care

**ACADEMIC PEDIATRICS** 2015;15:651–657

## WHAT'S NEW

This multisite study supports previous data demonstrating increased reported caregiver–child reading frequency in families participating in Reach Out and Read. Uniquely, it also identifies the interplay of multiple variables which predict reading frequency which may be targets for literacy-promoting interventions in the primary care setting.

THE COGNITIVE, SOCIAL, and emotional development of children is influenced strongly by the frequency with which their caregivers read to them in early life.<sup>1–5</sup> Impoverished, single-parent, black, and Latino families have lower frequencies of caregiver–child reading,<sup>6</sup> leading to disparities in language development, vocabulary, and reading comprehension of children by the time of school entry.<sup>7</sup> Reach Out and Read (ROR), a widely used model in pediatric office-based literacy promotion, has repeatedly demonstrated an ability to combat disparities

in child development by increasing both reading frequency and child language development in disadvantaged groups.<sup>8–12</sup> This study seeks to examine the relative importance of ROR and other factors which may influence caregivers' reading frequencies and thus the development of early childhood literacy.

Reading may stimulate cognitive development more than other forms of caregiver–child interaction as reading contains a higher frequency of characteristics that are positive predictors of language development than toy play, mealtime, or dressing.<sup>13</sup> Caregivers' reading aloud to children from an early age has also been associated with improved development of preschool language skills and interest in reading.<sup>14</sup> Studies have demonstrated that shared reading as early as 6 months is associated with improved language development at 2 years and subsequent reading activities.<sup>1,2</sup> Additionally, research has shown that frequent book sharing (with more than 3 times per week considered high frequency in studies performed by the US Department of Education, developmental pediatricians, and other literacy researchers)

correlates positively with emergent literacy skills in children.<sup>12,15,16</sup> This suggests that increasing the frequency to daily could improve developmental outcomes. The American Academy of Pediatrics endorses daily reading as a tool to prepare children for school.<sup>17</sup>

ROR is a national organization that attempts to reduce early reading disparities and improve the quantity and quality of caregivers' reading to children by promoting early literacy during health supervision visits.<sup>18,19</sup> Medical providers distribute books to caregivers during health supervision visits from age 6 months to 5 years, give age-appropriate literacy guidance on how the children will likely interact with the book, and model developmentally appropriate reading. By the time a child is 5 years old, he or she will have a library of about 10 books from the ROR program. A large body of peer-reviewed research suggests that the ROR intervention increases the frequency of parents reading to children,<sup>9,11</sup> enhances children's receptive and expressive language capacity,<sup>9-11</sup> and increases caregiver interest in reading.<sup>12</sup> These findings are cited in a 2014 American Academy of Pediatrics Policy Statement on Literacy Promotion, which calls for literacy promotion during health supervision visits from birth to 5 years of age, and which recommends pediatricians promote daily reading to families in addition to providing a developmentally appropriate book.<sup>20</sup> Since its inception in 1991, ROR has spread to over 5000 clinics in the United States, distributing books to over 4 million children.<sup>18</sup>

This study adds to the existing literature, which suggests that ROR enhances early childhood literacy. Figure 1 represents a conceptual model of the development of early childhood literacy. This model highlights the many interrelated factors and potential confounders that may influence literacy development. Previous studies have examined how literacy-promoting interventions improve caregiver reading frequency and enhance literacy development.<sup>1-3,8-12</sup> Additionally, other studies have investigated how caregiver literacy-oriented beliefs influence reading habits.<sup>21,22</sup> However, the complex interaction among pediatrician-delivered interventions, caregiver characteristics, caregiver attitudes, and caregiver practices in relation to reading frequency has not yet been explored.

We hypothesized that exposure to the ROR-Milwaukee (ROR-M) intervention would positively correlate with shared reading frequency. We also sought to understand the relative importance of variables such as caregiver characteristics, attitudes, and practices in predicting reading frequency in families seeking routine health care at ROR-M sites.

## METHODS

### STUDY DESIGN AND SETTING

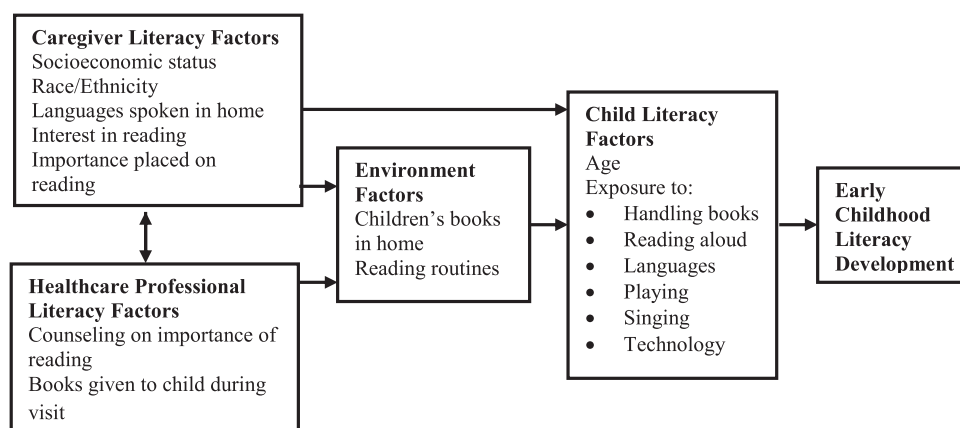
This is a multisite cross-sectional study based on caregivers' report. After approval by the Medical College of Wisconsin's institutional review board, the study took place from September 2013 to May 2014 in Milwaukee, Wisconsin, at the 8 ROR-M sites serving a predominantly low-income population in the central city. During 2014, there were 13,648 annual well-child encounters for children 0 to 5 years old across the 8 sites. Insurance coverage for patients was predominantly Medicaid (91.97%), private or health maintenance organization non-Medicaid (4.69%), or self-pay/uninsured 1.58%.

### PARTICIPANTS

Convenience samples of families presenting for routine health care at each site were given the opportunity to enroll onto this study. Eligible study subjects were caregivers with children between the ages of 6 to 59 months. If 2 caregivers for a child were present, the first to volunteer completed the survey. If the child's caregiver was under 18 years old, the survey was not administered. If 2 children in the same family within the age range of the study presented at the same time, only the first child referenced by the caregiver was enrolled. Children with birth weight <2500 g or severe neurodevelopmental disability were excluded. No incentives were given for participation.

### VARIABLES AND DATA SOURCES

A 25-item questionnaire (available in English and Spanish) was adapted from the Before-and-After-Books and Reading survey,<sup>23</sup> designed in 1998 by members of



**Figure 1.** Model of mediators in early childhood literacy development.

Download English Version:

<https://daneshyari.com/en/article/4139006>

Download Persian Version:

<https://daneshyari.com/article/4139006>

[Daneshyari.com](https://daneshyari.com)